

Abstract

Theme

To inhibit the lens aberration in an objective lens for recording and reproducing optical information, which is composed of a molded aspherical single lens, while attaining at the same time good lens productivity, and also to ensure excellent optical properties and to obtain a high production efficiency in a mold processing step and a press molding step conducted to manufacture the lens.

Means for solving the problems

An objective lens 1 is a lens wherein a convex aspherical surface is formed at the first surface and a numerical aperture NA satisfies the condition, $NA \geq 0.8$. It is preferable to have an aspherical surface also at the second surface. A molding material that was premolded to a prescribed shape and is in a heated and softened state is press molded by using a pair of upper and lower molds having opposing molding surfaces, a molding surface shape is transferred by using a spherical molding material with a radius r and pressing the molding material between a pair of upper and lower molds, and the paraxial curvature radius R of the convex aspherical surface satisfies the following relation $r/R \leq 1.35$.

The objective lens optical system comprises an objective lens 1 and a cover glass (CG) 2.

Selected Drawing : Fig.1